

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Andrew Powell, Jeremy Turnbull and Edwin Yates

U.S. National Phase Application of
International Application No.: PCT/GB2003/003236 Filed: 17 July 2003

Assigned United States Application No.: 10/521,522

Group Art No.: 1645 Confirmation No.: 2122

Title: SACCHARIDE LIBRARIES

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INFORMATION DISCLOSURE STATEMENT

Commissioner for Patents
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Sir:

This Information Disclosure Statement is submitted:

- ☐ under 37 CFR 1.129(a), or
(First/Second submission after Final Rejection)
- ☒ under 37 CFR 1.97(b), or
(Within any one of the following time periods: three months of filing national application (other than a CPA) or date of entry of the national stage in an international application; or before the mailing date of a first office action on the merits in a non-provisional application, including a CPA, or a Request for Continued Examination).
- ☐ under 37 CFR 1.97(c) together with either:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, or
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(After the 37 CFR 1.97(b) time period, but before final action or notice of allowance, whichever occurs first)
- ☐ under 37 CFR 1.97(d) together with:
- ☐ a Statement under 37 CFR 1.97(e), as checked below, and
- ☐ a \$180.00 fee under 37 CFR 1.17(p), or
(Filed after final action or notice of allowance, whichever occurs first, but on or before payment of the issue fee)
- ☐ under 37 CFR 1.97(i):
Applicant requests that the IDS and cited reference(s) be placed in the application filewrapper. (Filed after payment of issue fee)

Statement Under 37 CFR 1.97(e)

- ☐ Each item of information contained in this Information Disclosure Statement was first cited in any communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this Information Disclosure Statement; or
- ☐ No item of information contained in this Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart foreign application, and, to the knowledge of the undersigned, after making reasonable inquiry, no item of information contained in the information disclosure statement was known to any individual designated in 37 CFR 1.56(c) more than three months prior to the filing of this Information Disclosure Statement.

Statement Under 37 CFR 1.704(d) (Patent Term Adjustment)

(Applies to original applications (other than design) filed on or after May 29, 2000)

- ☐ Each item of information contained in the Information Disclosure Statement was cited in a communication from a foreign patent office in a counterpart application and this communication was not received by any individual designated in -§ 1.56(c) more than thirty days prior to the filing of the Information Disclosure Statement.
- ☒ Enclosed herewith is form PTO-1449:
- ☒ Copies of the cited references (AL-AN and AR-AS2) are enclosed.
- ☒ Since this application was filed after June 30, 2003, copies of issued U.S. patents and published U.S. applications are not required and are not being provided.
- ☐ Copies of cited references are enclosed except those entered in prior application, U.S. Application No. [], to which priority under 35 U.S.C. 120 is claimed.
[The earlier application contains copies of the cited references.]
- ☒ The listed references (AF & AS2) were cited in the enclosed International Search Report in a counterpart foreign application.
- ☐ The "concise explanation" requirement (non-English references) for reference(s) [] under 37 CFR 1.98(a)(3) is satisfied by:
- ☐ the explanation provided on the attached sheet.
 - ☐ the explanation provided in the Specification.
 - ☐ submission of the enclosed International Search Report.
 - ☐ submission of the enclosed English-language version of a foreign Search Report and/or foreign Office Action.
 - ☐ the enclosed English language abstract.

It is requested that the information disclosed herein be made of record in this application.

Method of payment:

- ☐ A check for the fee noted above is enclosed, or the fee has been included in the check with the accompanying Reply. A copy of this Statement is enclosed.
- ☐ Please charge Deposit Account ☐ in the amount of [\$]. A copy of this Statement is enclosed.
- ☒ Please charge any deficiency in fees and credit any overpayment to Deposit Account 502807.

Respectfully submitted,

ELMORE, CRAIG & VANSTONE, P.C.

By 

Carolyn S. Elmore

Registration No.: 37,567

Telephone: (978) 251-3509

Facsimile: (978) 251-3973

Chelmsford, MA 01863

Dated: 

PTO-1449 REPRODUCED INFORMATION DISCLOSURE CITATION IN AN APPLICATION June 13, 2005 (Use several sheets if necessary)	ATTORNEY DOCKET NO. 4033.3000 US		U.S. NATIONAL PHASE OF INTERNATIONAL APPLICATION NO. PCT/GB2003/003236	
	FILING DATE		ASSIGNED UNITED STATES APPLICATION NO.: 10/521,522	
	FIRST NAMED APPLICANT Andrew Powell		CONFIRMATION NO.	GROUP

U.S. PATENT DOCUMENTS						
EXAM- INER INI- TIAL	REF. NO.	DOCUMENT NUMBER	MM-DD-YYYY ISSUE DATE / PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT		
	AA	US-5,430,133	July 4, 1995	Piani, <i>et al.</i>		
	AB	US-5,405,949	April 11, 1995	Ungarelli, <i>et al.</i>		
	AC	US-5,543,403	August 6, 1996	Petitou, <i>et al.</i>		
	AD	US-5,958,899	September 28, 1999	Zopetti, <i>et al.</i>		
	AE	US-4,717,719	January 5, 1988	Sportoletti, <i>et al.</i>		
	AF	US-6,127,347	October 3, 2000	Holme, <i>et al.</i>		
	AG	5,795,860	08-18-1998	Witt <i>et al.</i>		
	AH	US 2001/0051349 A1	12-13-2001	Dukler <i>et al.</i>		
FOREIGN PATENT DOCUMENTS						
		DOCUMENT NUMBER	MM-DD-YYYY PUBLICATION DATE	NAME OF PATENTEE OR APPLICANT OF CITED DOCUMENT	TRANSLATION YES NO	
	AL	EP 0380719	1990-AUG-08	AJORCA SA (AR) Domanico Ricardo Hugo, <i>et al.</i>		
	AM	EP 0 557 887 B1	12-17-1997	Lino Liverani <i>et al.</i>		
	AN	WO 01/40796 A3	06-07-2001	Thermo Hybaid GMBH <i>et al.</i>		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
	AR	Kariya, Yutaka, <i>et al.</i> , "Preparation of Completely 6-O-Desulfated Heparin and Its Ability to Enhance Activity of Basic Fibroblast Growth Factor," <i>J. Biol. Chem.</i> , 275(34): 25949-25958 (2000).
	AS	Yates, Edwin A., <i>et al.</i> , "Evidence for a Heparin Derivative Containing an N-Sulfated Aziridine Ring that Retains High Anti-Factor Xa Activity," <i>Carbohydr. Res.</i> , 298:335-340 (1997).
	AT	M. Jaseja, <i>et al.</i> , "Novel Regio- and Stereoselective Modifications of Heparin in Alkaline Solution. Nuclear Magnetic Resonance Spectroscopic Evidence," <i>Can. J. Chem.</i> , 67:1449-1456 (1989).
	AU	Guimond, S.E. and Turnbull, J.E., "Fibroblast Growth Factor Receptor Signalling is Dictated by Specific Heparan Sulphate Saccharides," <i>Curr Biol.</i> , 9:1343-1346 (1999).
	AV	Irie, A., <i>et al.</i> , "Specific Heparan Sulfate Structures Involved in Retinal Axon Targeting," <i>Development</i> , 129: 61-70 (2002).
	AW	Kreuger, J., <i>et al.</i> , "Sequence Analysis of Heparan Sulfate Epitopes with Graded Affinities for Fibroblast Growth Factors 1 and 2," <i>J. Biol. Chem.</i> , 276(33): 30744-30752 (2001).

EXAMINER	DATE CONSIDERED
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	FIRST NAMED APPLICANT Andrew Powell	CONFIRMATION NO.	GROUP

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
AX	Nadkarni, V.D. and Linhardt, R.J., "Directional Immobilization of Heparin onto the Nonporous Surface of Polystyrene Microplates," <i>Biotechniques</i> , 23:382-385 (1997).	
AY	Nadkarni, V.D., <i>et al.</i> , "Directional Immobilization of Heparin onto Beaded Supports," <i>Anal Biochem.</i> , 222: 59-67 (1994).	
AZ	Yates, Edwin A., <i>et al.</i> , "H and C NMR Spectral Assignments of the Major Sequences of Twelve Systemically Modified Heparin Derivatives," <i>Carbohydrate Research</i> , 294: 15-27 (1996).	
AR2	Dove, Alan, "The Bittersweet Promise of Glycobiology," <i>Nature Biotechnology</i> , 19: 913-917 (2001).	
AS2	Database Biosis, Biosciences Information Service, Philadelphia, PA, US. Wu, Zhengliang L., <i>et al.</i> , "A New Strategy for Defining Critical Functional Groups on Heparan Sulfate," <i>FASEB J.</i> , 16(6), XP002268531 abstract (2002).	

EXAMINER	DATE CONSIDERED
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